DOCKET NO.: 249549US8

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:
Kazuo SUGIMOTO, et al.

GROUP: 2621

SERIAL NO: 10/787,182

EXAMINER: ANYIKIRE, C.

FILED: February 27, 2004

FOR: IMAGE ENCODING APPARATUS, IMAGE ENCODING METHOD, IMAGE ENCODING PROGRAM, IMAGE DECODING APPARATUS, IMAGE DECODING METHOD AND IMAGE DECODING PROGRAM

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

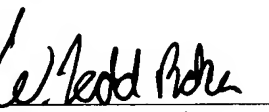
This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s). No more than five (5) pages are provided.

I am the attorney or agent of record.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



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REMARKS/ARGUMENTS

Claims 1-14 are pending in this application.

Claim 1 recites:

An image encoding apparatus comprising:

conversion means for converting coding target blocks within a coding target image into conversion information;

quantization means for quantizing the conversion information and generating quantized conversion information; and

encoding means for generating compression data by encoding the quantized conversion information based on the size of the blocks, and for generating a compression code used to generate the compression data, wherein

the encoding means encodes the quantized conversion information based on a plurality of sizes of the blocks, and generates the compression code corresponding to each size of the blocks, and

the block size and compression code corresponding to the lowest bit rate is included in a header information.

Claim 8 recites:

An image decoding apparatus comprising:

decoding means for decoding **block size information included in a header**, and for generating quantized conversion information by decoding compression data based on the decoded block size information;

inverse quantization means for inversely quantizing the quantized conversion information and generating conversion information; and

inverse conversion means for inversely converting the conversion information into decoding target blocks within a decoding target image.

The block size information included in a header feature (see the bolded limitations above) is not met by Neff et. al. The February 04, 2008 final action (hereinafter "final action") asserts that the header feature is taught in Sec. III, Part B, sub-part 3, lines 26-35 of Neff. The May 30, 2008 advisory action asserts that the header limitation is inherent. Both assertions are clear error for the reasons provided below. Further, Applicants submit that Neff fails to disclose or suggest (i) encoding means for encoding quantized conversion

information based on the size of the blocks or (ii) encoding means for generating compression code corresponding to each size of the blocks.

Briefly recapitulating, the present invention is directed to an image encoding device including, among other things, conversion means for converting coding target blocks within a coding target image into conversion information; and encoding means for generating compression data by encoding quantized conversion information based on the size of the blocks, and for generating a compression code used to generate the compression data. The encoding means encodes the quantized conversion information based on a plurality of sizes of the blocks, and generates the compression code corresponding to each size of the blocks. The block size and compression code corresponding to the lowest bit rate is included in header information.

As a consequence of this configuration, the bit rate of compression data can be reduced as a compression code corresponding to an optimal block size for every coding target frame, and can be communicated via the header to the decoder. See the Specification, page 32, line 22- page 33, line 1.

Claim 3 is directed to the analog encoding method of claim 1. Claim 7 is directed to a computer readable medium encoded with computer executable instructions for encoding an image according to the method of independent claim 3.

Claim 8 is directed to an image decoding apparatus including a decoding means for decoding block size information included in a header, and for generating quantized conversion information by decoding compression data based on the decoded block size information. Claim 10 is directed to the analog decoding method of claim 8. Lastly, claim 14 is directed to a computer readable medium encoded with computer executable instructions for decoding an image according to the method of independent claim 10.

The method of the Neff publication uses a "Matching Pursuits" process which teaches away from block based systems. Neff asserts that block based coding results in distortion and block edge artifacts at low bit rates. See page 1, col. 2, lines 10-19 of Neff. Consequently, the Neff system removes grid positioning restrictions.

The final action asserts that Sec. III, Part B, sub-part 3, "Coding Atom Parameters" teaches an encoding process based on block size. Applicants respectfully traverse. That section teaches how to code the parameters for each located atom wherein atoms are located on a block by block basis using the "Find Energy" procedure. However, as stated in Sec. III, Part A, Neff teaches coding a frame using an overlapping window motion as opposed to a block-based DCT system to avoid the artifacts problem discussed above.

> An H.263 encoder normally codes intra blocks using the DCT. Since we wish to avoid DCT artifacts in the matching pursuit coder, we follow a different approach for coding intra blocks.

Consequently, Applicants respectfully submit that, contrary to the assertions in the final action, Neff fails to teach or suggest optimizing the block size or communicating the optimal block size, used in coding a frame, to a decoder using the header of the frame. Further, the final action does not explain how the cited passage of Neff et al. discloses the feature of encoding the quantized conversion information based on a plurality of sizes of the blocks, and generating the compression code corresponding to each size of the block. The final Action asserts that Neff et al. disclose that the block size and compression code corresponding to the lowest bit rate is included in header information. However, the passage cited in the final action does not teach that subject matter. Thus, Neff et al. are not believed to anticipate or render obvious the subject matter of the present invention (claims 1, 3, 7, 10, and 14) when considered alone of in combination with the applied secondary references. The dependent claims are believed to be allowable for at least the same reasons that their respective independent claims are believed to be allowable.

Regarding dependent claim 6, although the passage relied upon by the final action includes the word "table," the passage does not disclose the feature of claim 6 wherein the encoding step includes executing the arithmetic coding by using predetermined probabilities stored in a table having different values according to the size of the block.

In view of the above arguments, it is believed that the outstanding rejections in the final action have been overcome, and the application is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.